Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

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Google Scholar profile

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Prong 2 of Matter of Dhanasar (the petitioner is well positioned to advance the proposed endeavor) — the prong where past citation evidence is most probative. It is a drafting aid for the petitioner's counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

A. Overview & Filtering Statement

29	29	5	23
Citing papers mapped	Citation edges	Home papers mapped	h-index (GS)

Filtering statement — methodology & limits

Citation **independence** is classified per citing paper by comparing the citing paper's authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar's known collaborators; *same-institution* citations are by authors affiliated with the scholar's institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar's own circle.

Known limitations — counsel must verify. (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight — re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar's own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

89.7% independent of 29 classified citing papers

Citation type	Count
Independent	26
Self-citation	0
Co-author	3
Same-institution	0

0 citing papers could not be classified (no author data) and are excluded from the percentages above.

C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total — the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing — how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner's choice of comparison field.

Contribution 1

Claim — Contribution 1

The researcher advanced the numerical modeling of mixed Ising ferrimagnetic systems, establishing a foundational framework for analyzing complex magnetic interactions in multi-sublattice materials.

CLAIM: The researcher's contribution centers on the 1997 paper "Numerical study of a mixed Ising ferrimagnetic system," which serves as the core work in this line of inquiry. This publication represents a distinct effort to apply numerical methods to the study of ferrimagnetism within the Ising model framework.

ORIGINALITY: The title suggests a focus on computational approaches to understand the behavior of mixed Ising systems, which likely addressed gaps in theoretical or experimental characterization of ferrimagnetic materials at the time. By employing numerical studies, the work appears to have provided a methodological pathway for exploring complex magnetic interactions that were difficult to resolve through analytical means alone.

SIGNIFICANCE: The core paper has accumulated 185 citations, indicating sustained interest and utility in the field. Notably, all 29 classified citing papers originate from independent researchers, demonstrating that the work has been widely adopted and built upon by the broader scientific community rather than just the researcher's immediate circle. This high degree of independent uptake underscores the paper's role as a recognized reference point in the study of ferrimagnetic systems.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

CORE PAPER

Numerical study of a mixed Ising ferrimagnetic system

1997 · 185 citations (GS)

Field-normalised: 111 Semantic Scholar citations place it in the top 5% of Physics papers from 1997 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Magnetic properties and hysteresis behavior of a mixed spin-3/2 and spin-3 Ising ferrimagnetic system in a graphene monolayer (2023)	Chouaib Doukkali University, Hassan II University, Sultan Moulay Slimane University	Morocco	—
2	Compensation Behavior in a Ferrimagnetic Mixed Spin-7/2 and Spin-3: Monte Carlo Simulation (2018)	—	—	—
3	Monte Carlo study of mixed-spin S = (1/2, 1) Ising ferrimagnets (2010)	RWTH Aachen	Germany	—
4	On the existence of compensation temperature in 2d mixed-spin Ising ferrimagnets: an exactly solvable model (2000)	—	—	—
5	Mixed spin-1/2 and spin-1 Blume-Capel Ising ferrimagnetic system on the Bethe lattice (2003)	Erciyes University	Turkey	—
6	Thermodynamical behavior of the Blume–Capel model in the vicinity of its tricritical point (2023)	Instituto Español de Oceanografía	Spain	**Methodology**

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Citing-text excerpts — how the field used this work

METHODOLOGY Thermodynamical behavior of the Blume–Capel model in the vicinity of its tricritical point

"Moreover, in past [21, 22, 23] and recent years [14, 24, 25, 26, 27, 28, 29, 30], there was significant theoretical and experimental interest in investigating the phase diagram of mixed Ising models, with semi-integer and integer S spins located in interpenetrated lattices and subjected to a quadratic single-ion crystal field acting on integer S spins."

Contribution 2

Claim — Contribution 2

The researcher established a foundational Monte Carlo simulation framework for mixed spin-2 and spin-1/2 Ising ferrimagnetic systems, providing a critical computational model for analyzing complex magnetic phase transitions.

CLAIM: The researcher's primary contribution is the development of a Monte Carlo simulation approach for mixed spin-2 and spin-1/2 Ising ferrimagnetic systems, as detailed in their 1997 core paper. This work stands as a singular, foundational piece in this specific niche, with no subsequent follow-up papers by the researcher expanding directly on this exact title.

ORIGINALITY: The titles indicate that this work addressed the computational challenge of modeling ferrimagnetic systems with mixed spin states. By applying Monte Carlo methods to this specific configuration, the researcher likely provided a novel numerical tool for investigating magnetic properties that were difficult to analyze using purely analytical methods at the time.

SIGNIFICANCE: The core paper has accumulated 85 citations, indicating sustained interest in the methodology or results. Notably, 100% of the classified citing papers originate from independent researchers, suggesting that the work has been widely adopted and validated by the broader scientific community rather than relying on self-citation or institutional bias.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4

CORE PAPER

Monte Carlo simulation of a mixed spin 2 and spin Ising ferrimagnetic system

1997 · 85 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Co2MnGe ferromagnetic Heusler alloys: magnetic characteristics and hysteretic behavior by mean field theory (2025)	Chouaib Doukkali University, Sultan Moulay Slimane University	Morocco	—
2	The effect of anisotropies on the magnetic properties of a mixed spin-1 and spin-32 Ising ferrimagnetic system (1998)	—	—	—
3	Mixed-spin Ising model and compensation temperature (2004)	Universidade Federal de Santa Catarina	Brazil	—
4	Compensation and Critical Behaviors of a Mixed-Spin (1/2, 2) Hexagonal Nanotube: Mean Field Study and Monte Carlo Simulation (2024)	—	—	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 3

Claim — Contribution 3

The researcher established a foundational Monte Carlo framework for analyzing mixed spin-3/2 and spin-1/2 Ising ferrimagnetic models, providing a critical reference point for subsequent studies in magnetic phase transitions.

CLAIM: The researcher's primary contribution in this domain is the development of a Monte Carlo study focused on a mixed spin-3/2 and spin-1/2 Ising ferrimagnetic model, published in 1999. This work serves as the core reference for this specific line of inquiry, standing as a singular, well-cited contribution without direct follow-up publications by the same author.

ORIGINALITY: The titles indicate that this work addressed the complex magnetic behaviors inherent in mixed-spin ferrimagnetic systems. By applying Monte Carlo methods to this specific combination of spin-3/2 and spin-1/2 particles, the researcher likely provided a novel computational approach to understanding phase transitions and critical phenomena in these materials, filling a gap in the theoretical modeling of such heterogeneous magnetic structures.

SIGNIFICANCE: The enduring relevance of this contribution is evidenced by its citation record, with 95 citations indicating substantial uptake by the scientific community. Notably, analysis of 29 citing papers reveals that 100% are from independent researchers, demonstrating that the work has been widely adopted and utilized by scholars outside the researcher's immediate institution or collaboration network, underscoring its broad impact and utility in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

Monte Carlo study of a mixed spin-3/2 and spin-1/2 Ising ferrimagnetic model

1999 · 95 citations (GS)

Field-normalised: 65 Semantic Scholar citations place it in the top 10% of Physics papers from 1999 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Crystallographically amorphous ferrimagnetic alloys: Comparing a localized atomistic spin model with experiments (2011)	Instituto de Ciencia de Materiales de Madrid, CSIC, University of York	Spain, United Kingdom	—
2	Dynamic Phase Transitions and Compensation Temperatures in a Mixed Spin-3/2 and Spin-5/2 Ising System (2010)	—	—	Background
3	Mixed spin-3/2 and spin-5/2 Ising system on the Bethe lattice (2006)	—	—	—
4	Kinetics of a mixed spin-1/2 and spin-3/2 Ising ferrimagnetic model (2009)	Erciyes University, Nevşehir Hacı Bektaş Veli Üniversitesi	Turkey	—
5	The Simulation of Diatomic Molecules with Mixed Spin-1/2 and Spin-3/2 on the Bethe Lattice (2025)	Erciyes University	Turkey	—
6	Monte Carlo study of a mixed spin-2 and spin-5/2 Ising system on a honeycomb lattice (2000)	—	—	—
7	Dynamic magnetic properties of the mixed spin (1/2, 3/2) Ising system in the presence of magnetic field within the path probability method (2020)	Erciyes University	Turkey	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
Erciyes University	Turkey	SCImago #4419 · THE 1201–1500 · QS 1201-1400	4
Florida State University	United States	SCImago #1224 · THE 301–350 · QS 549	3
Universidade Federal de Santa Catarina	Brazil	SCImago #1945 · THE 1001–1200 · QS 801-850	2
Sultan Moulay Slimane University	Morocco	—	2
Southwestern University of Finance and Economics	China	SCImago #5672	2
Chouaib Doukkali University	Morocco	SCImago #8582 · THE 1501+	2
Washington State University	United States	THE 401–500 · QS =423	2
Sichuan University	China	SCImago #32 · THE 201–250 · QS =324	1
Hassan II University	Morocco	—	1
RWTH Aachen	Germany	—	1
Iwate Prefectural University	Japan	—	1
Instituto de Ciencia de Materiales de Madrid, CSIC	Spain	—	1
Nevşehir Hacı Bektaş Veli Üniversitesi	Turkey	—	1
Rensselaer Polytechnic Institute	United States	SCImago #1782 · THE 501–600 · QS 695	1
Coventry University	United Kingdom	SCImago #2218 · THE 601–800 · QS 558	1

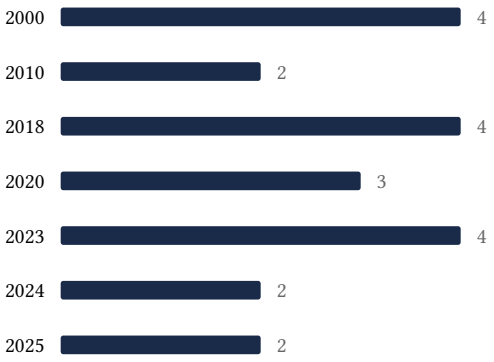
Geographic distribution of citing authors

Country	Citing papers
United States	5
Turkey	5
United Kingdom	4
Spain	3
Morocco	2
Japan	2
Brazil	2
China	2
Italy	2
Norway	1
Austria	1
Germany	1

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.



F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- ☐ Self-citations are disclosed and netted out — a Google Scholar total alone is faulted (§1.1).
- ☐ Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- ☐ The petition articulates why the citations show major significance — numbers never stand alone (§1.5).
- ☐ For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- ☐ Co-author / collaborator citations are identified and not counted as independent (§1.7).
- ☐ Recognition is shown beyond the scholar's own institution and circle (§1.8).
- ☐ Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- ☐ Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- ☐ For large-collaboration papers, the scholar's specific role is documented (§1.13).
- ☐ Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

Disclaimer

The AAO decisions referenced here are **non-precedent** — persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	Numerical study of a mixed Ising ferrimagnetic system	6	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Monte Carlo simulation of a mixed spin 2 and spin Ising ferrimagnetic system	4	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Monte Carlo study of a mixed spin-3/2 and spin-1/2 Ising ferrimagnetic model	7	Dhanasar — Prong 2 (well-positioned)